

REMARKS

Claims 1-2 stand rejected under 35 U.S.C. 102(b) as being anticipated by Chen et al. (U.S. 5,846,648). Applicant respectfully traverses this rejection because the cited reference does not disclose (or suggest) a polycrystalline structure film having physically separated, or spatially spaced, metallic nucleation sites formed on a surface of a substrate, as in claim 1 of the present invention, as amended.

Chen discloses in Fig. 2 a seed layer 22 of randomly orientated discrete grains 74 on a substrate 12. Although the Examiner is correct that Chen teaches that the grains 74 are “discrete” (col. 9, line 46), the Examiner is incorrect in asserting that “discrete” is equivalent to “physically separated.” In fact, Chen specifically teaches the opposite. Chen unequivocally states that the grains 74 are contiguous (col. 16, line 49), which is the exact opposite of being physically separated. The very definition of the word “contiguous” is “touching.” Bodies which are touching are therefore not, by definition, physically separated.

Nevertheless, in the interests of expediting prosecution, Applicant has amended claim 1 to propose an alternate wording for the claim language “physically separated.” Applicant has replaced this phrase with the synonymous phrase “spatially spaced.” Similar to the argument above, elements which are spatially spaced cannot, by definition, be touching or contiguous. Applicant submits that the amended claim language is an alternate wording of the synonymous previous claim language, and therefore raises no new issues requiring further search or consideration by the Examiner, and therefore is also appropriate for entry even after final rejection.

As clearly shown by Chen, the fact that the grains 74 are discrete by no means teaches or suggests that such grains are also physically separated or spatially spaced, which they are not shown to be by any embodiment of Chen. Accordingly, for at least these reasons, the Section 102 rejection of claim 1 of the present invention based on Chen is respectfully traversed.

Additionally, Applicant further notes that the Examiner's own definition of the term "discrete" on page 4 of the outstanding Office Action cannot be applied to the Chen reference. The Examiner defines "discrete" as meaning "consisting of *unconnected* distinct parts." (Emphasis added). Chen, on the other hand, specifically teaches that the grains 74 are connected. As explained above, the definition of the term "contiguous" means "touching," or connected. Accordingly, Applicant submits that the Examiner has applied an unreasonable definition to the term "discrete," one that is contradicted by the prior art reference itself. For at least these reasons, Applicant submits that the Examiner has not satisfactorily answered Applicant's previous traversal of the outstanding rejection, and the Section 102 rejection should therefore be withdrawn for these reasons as well.

With regard to claim 2 of the present invention specifically, Applicant respectfully traverses the rejection for at least the reasons discussed above with respect to independent claim 1. Claim 2 depends from independent claim 1, and therefore includes all of the features of the base claim, plus additional features. Applicant further traverses the rejection of claim 2 based on Chen because Chen does not disclose (or suggest) that metallic nucleation sites include a metallic compound.

Applicant specifically traverses the Examiner's definition of the term "compound" and his assertion that "alloy" and "compound" are merely synonymous within this field of art. Just the opposite is true. When the dictionary definition of a particular term can have several different meanings, as exemplified by the Examiner's appendices to the outstanding Office Action, the Examiner is required to choose a definition that is at least consistent with not only the present Specification and the prior art, but also their field of art itself. In the present case, the Examiner has not done so.

In defining the term "compound," the Examiner has chosen the broadest general definition (noun item 1 in the Appendix), and avoided the specific definition as the term relates to chemistry, which is a broad field of art encompassing both the present invention and the Chen reference. Noun item 3 of the appendix definition for "compound," on the other hand, is entirely consistent with Applicant's definition in the previous argument, namely, that a "compound" is a pure chemical substance consisting of two or more different elements in definite proportions that cannot be separated by physical means. Those skilled in the art are well aware that this definition is significantly different than what constitutes an "alloy," which requires the combination of two or more metals only. In this particular field of art, skilled practitioners recognize metal alloys as being different from metallic chemical compounds, and that there are numerous metallic chemical compounds that cannot be considered to be alloys. Applicant again respectfully submits that the Examiner is required to interpret all claim terms consistently with the Specification to the present Application, and with the field of art of the invention.

It is a well-established principle of United States patent law that, although the Examiner is to give all claims and claim terms their broadest possible interpretation, any such interpretation must be consistent with the Specification. Because the specific claim terms at issue are clearly defined within the Specification to the present Application in a way entirely consistent with Applicant's previous and current arguments, Applicant again respectfully requests that the Examiner not pick and choose more obscure definitions of the terms that are inconsistent with the Specification and the field of art. Accordingly, for at least these reasons as well, the Section 102 rejection of claim 2 is again respectfully traversed.

Claims 3-6 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Chen. Applicants respectfully traverse this rejection for at least the reasons discussed above in traversing the rejection of independent claim 1 (and 2). Claims 3-6 all depend directly or indirectly from independent claim 1, and therefore include all of the features of the base claim, plus additional features.

Applicant further traverses this rejection because Chen specifically teaches away from the present invention. Any prior art reference which specifically teaches away from the present invention cannot form the basis of an obviousness rejection. In the present case, as discussed above, Chen emphasizes that the grains 74 on the substrate 12 are "contiguous." Given this particular emphasis by Chen that the grains 74 are touching and connected, it could not be obvious to then physically separate or spatially space these same grains. Accordingly, Chen is an inappropriate reference for an obviousness rejection against

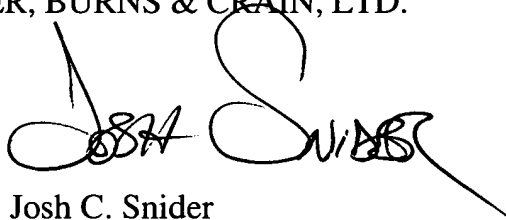
the present invention, and the rejection should therefore be withdrawn for at least these further reasons.

For all of the foregoing reasons, Applicant submits that this Application, including claims 1-6, is in condition for allowance, which is respectfully requested. The Examiner is invited to contact the undersigned attorney if an interview would expedite prosecution.

Respectfully submitted,

GREER, BURNS & CRAIN, LTD.

By

A handwritten signature in black ink, appearing to read "Josh C. Snider", is written over the printed name.

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